

CLAIMS

1. A device for punching unfired, sheetlike ceramic substrates, in particular so-called green sheets,

having a receiving device (6), which has a substantially flat receiving face for a ceramic substrate (32), and in which punched holes (7) are embodied;

having at least one die (8), which is disposed above a punched hole (7) and has a shaft (15) and an operative portion (23) that extends through a stripper opening (24) and whose diameter is less than the diameter of the shaft (15) and greater than the diameter of an associated punched hole (7), and the operative portion (23) has a punching portion (26) whose diameter is somewhat less than the diameter of the punched hole (7),

having a drive mechanism, which is connected in driving fashion to the die (8) in order to move linearly by a defined stroke and in the process to move the punching portion (26) into the punched hole (7) and out of it,

having a die guide device (17), through which the shaft (15) extends and which guides the die (8) at its shaft (15).

2. The punching device of claim 1, characterized in that the punching portion (26) is unguided in the transverse direction.

3. The punching device of claim 1, characterized in that the die guide device (17) includes a bush (18) with a passage which defines a guide face for the shaft (15).

4. The punching device of claim 1, characterized in that the stripper opening (24) has a length that exceeds the length of the punching portion (26).

5. The punching device of claim 1, characterized in that the length of the punching portion (26) is essentially equal to the length of the stroke of the drive mechanism.

6. The punching device of claim 1, characterized in that the length of the operative portion (23) is greater than the stroke of the drive mechanism.

7. The punching device of claim 1, characterized in that the punched hole (7) is a through bore, which opens into a slug conduit (28) which has a greater diameter than the punched hole (7).

8. The punching device of claim 1, characterized in that the diameter of the shaft (15) amounts to a multiple of the diameter of the operative portion (23).